

ABSTRACT OF THE DISCLOSURE

An optical transmission system including at least one optical transmitter configured to transmit at least one signal wavelength and a tuning wavelength, an optical
5 receiver including an optical filter having a filter bandwidth including the at least one signal wavelength and a percentage of the tuning wavelength and an optical to electrical signal converter configured to receive the at least one signal wavelength from said filter, a first tuning
10 optical to electrical converter configured to receive a first portion of the tuning wavelength stopped by said filter, a second tuning optical to electrical converter configured to receive a second portion of the tuning wavelength passed by said filter, and a filter controller configured to tune the
15 filter bandwidth based on the relative proportion of first and second portions of the tuning wavelength provided to the first and second tuning optical to electrical converters.

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